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AUTHOR Mikulecky, Larry: Olshavsky, Jill Edwards
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ABSTRACT

A study was undertaken to identify the strategies good and poor readers at the university level use when reading a text assignment. Forty-four study strategies were identified based on answers to a questionnaire concerning how they studied that was given to one hundred university freshmen enrolled in an elective reading and study skills class. Next, a comparable sample of 133 freshmen students were given both an economics chapter to read and the 44 strategies, followed by a seven point Likert-type scale to indicate the frequency with which they perceived themselves using each strategy. The 133 freshmen were divided into good, average, and poor readers according to their scores on the Nelson-Denny Reading Test. The good and poor readers' responses to the 44 questions were analyzed. Analysis revealed few significant differences between responses of good and poor readers. Two of the reported differences between good and poor readers were that good readers' strategies reflected a sense of a serious, systematic approach to text reading and that good readers reported reading for an overview more often than did poor readers. (MKM)

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Larry Mikulecky
Indiana University
Bloomington

Jill Edwards Olshavsky
Indiana Department of Public Instruction

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Differences in Textbook Strategies Good and Poor University Level Readers Perceive Themselves Employing

Research has shown that comprehension is affected by the interaction of many reader and print factors. Most of the recent research attempting to understand this interaction has used a laboratory setting and fictional material. Little research has examined the process students use to comprehend the factual, textbook material they read for university level classes. The purpose of this study was to identify the strategies good and poor readers at the university level use when reading a text assignment.

Introduction

Previous research has studied the effect of the reader on the comprehension process by comparing good and poor readers. Several studies have examined reader performance in areas that are closely related to reading such as personality (Beldin, 1976), self esteem (Sweet and Burbuch, 1977), and the effects of teacher presentation (Judge, 1977; Allington, 1978). Others have examined the process by analyzing cognitive and linguistic processing (Adams, 1977; Allington and Strange, 1977; Guthrie and Tyler, 1976), eye movements and rate of processing (Cohen, 1978; Edfeldt, 1975; Imola, et al., 1976; Sammuels, Begy and Chen, 1976), oral reading miscues (Goodman, 1970), retrospective

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accounts of the process (Fareed, 1971; Piekarz, 1956), and protocols recorded during reading (Olshavsky, 1976-1977). These studies generally have concluded that good and poor readers use the same strategies though good readers use strategies more frequently and are more apt to try multiple approaches. Good readers also focus on larger units of text, are more flexible and are better able to adjust their strategies to fit their purposes. Poor readers are less flexible and focus at the word level (Golinkoff, 1975-1976).

Examinations of the text, as in discourse analysis, now go beyond the sentence to consider characteristics of paragraphs and passages as well as relations between sentences (Pearson, 1978, p. 17). Research has revealed, for example, that causal relationships between propositions, cohesion in the text, and familiar structures facilitate comprehension (Thorndyke, 1977).

Research on strategies for studying written discourse can make use of existing methodologies. Bransford (1979) found that teaching college students to make sentences semantically congruent helped them remember the sentences. He began with the premise that memory would involve learning facts and their relevance. This method of relating new information to prior information may be a strategy college age readers use.

Problem Statement

Each of the methodologies used by the researchers cited above has one or more drawbacks. Some focus on reader strategies in uncharacteristic laboratory settings while others are constrained by the need to use a small print sample that lends itself to detailed text analysis. None actually present readers with a complete textbook chapter in a setting that provides extra-linguistic cues comparable to the cues encountered in actual academic textbook reading experiences.

For this study, the researchers chose to present subjects with a textbook chapter in an academic setting. The cues present in this shared experience were used to help initiate subjects into a hypothetical assessment of the strategies and approaches each usually employed in similar situations. Thus, what this study is attempted to measure is the difference between good and poor reader self-perceptions about reading strategies in a carefully defined textbook reading situation.

To identify and explore the strategies good and poor readers at the university level perceived themselves as using to read a text assignment, three hypotheses were tested:

1. Good readers will perceive themselves as employing strategies more frequently than poor readers as evidenced by a significantly ($p < .05$) higher total strategy response score.

2. Good readers' perceptions of purpose for reading will differ significantly ($p < .05$) from poor readers' perceptions of purpose for reading.

3. Poor readers will perceive interest in material to be an important contributor to comprehension significantly ($p < .05$) more frequently than good readers.

Procedure

The first step was to identify study strategies university freshmen use. One hundred university freshmen enrolled in an elective reading and study skills class were given an economics chapter to examine briefly. Then, without referring to the chapter, the students were asked to respond to six general questions concerning their goals in reading the assignment; what they would do first, second, and third; and what they would do if they came

to a word or words they did not know. Based on the responses to this open-ended questionnaire, 44 strategies were identified by the researchers.

The second step was to determine the frequency of strategy usage by the good and poor readers in a comparable sample of 133 freshman students. Scores on the Nelson Denny Reading Test, Form A, were used to determine reading proficiency. Good readers were defined as being one standard deviation above the mean total score and poor readers as being one standard deviation below. Good readers (22 out of the sample of 133) scored between 90-160 , poor readers (21), scored between 25-47, and average readers (90), scored between 48 and 89. Scores on a cloze test, based on a tenth grade level passage, administered to the subjects correlated with the standardized scores at r = .69. The sample of 133 freshmen were given the economics chapter and the 44 strategies followed by a seven point Likert-type scale to indicate the frequency with which they perceived themselves using each strategy. See Table A (Appendix) for the questionnaire.

Data Analysis

The good and poor readers' responses to the 44 questions were analyzed using one-way ANOVA to determine whether to use pooled or separate variance. Pooled variance was judged appropriate. Second, the researchers developed seven constructed variables from the 44 strategies: Reading for Detail; Reading for Specific Purpose; Reading for an Overview; Comprehension Strategies; Vocabulary Strategies; Notetaking and Underlining; and Role of Interest. These sub-categories were reflected by a minimum of two items (Role of Interest) and a maximum of eleven items (Comprehension Strategies).

Results

Analysis revealed few significant differences between responses of good and poor readers. The Total Reading Strategies mean scores of poor readers

(N = 22) $\bar{x}$ = 188.7 and good readers (N = 21) $\bar{x}$ = 194.6 demonstrated a non-significant t-value of .7. Contrary to the researchers' initial hypothesis, good readers do not seem to perceive themselves as employing more often the forty-four student generated reading goals and strategies. Of the seven sub-categories of strategies, a significant ($t = 2.3$, $p < .025$) mean score difference between good and poor readers was found only in the Reading for an Overview category with good readers (N = 21) demonstrating a mean of 17.2 and poor readers (N = 22) a mean of 15.2. The three items comprising the overview variable referred to reading "to get main ideas," "to get a general idea," and "to be able to put the author's words in my own." Good readers clearly perceive themselves as doing these things significantly more often than poor readers. Other goals, purposes, and strategies for reading reflected no such differences in reader self-perception. Hypothesis two is thus only partially accepted and hypothesis three on Role of Interest is rejected.

Two categories contained nearly half the student generated items (Comprehension Strategies, 11 items and Vocabulary Strategies, 10 times). It was reasoned that though no differences between groups existed on the summed responses of these two variables, there might exist significant differences in responses to particular comprehension or vocabulary strategies. In order to examine for this, a more rigorous post-hoc analysis of individual comprehension and vocabulary items was performed using analysis of variance ($p < .05$), and when warranted by the ANOVA results, post-hoc Scheffe´ tests using a 95% confidence interval.

Scheffe´ tests revealed significant differences between good and poor reading groups for three comprehension strategies and two vocabulary strategies. These items, group mean scores, and variances are displayed below:

Significant Response Differences Between Good and Poor Readers

	GOOD (N = 21)		POOR (N = 22)	
	X	s^2	X	s^2
Give special attention to graphs, sub-headings, italics, etc.	5.8	1.74	4.6	2.49
Read the chapter to comprehend and remember important information	5.8	1.25	4.9	2.49
Skip around to get an idea of the topic	2.8	1.32	4.3	2.99
Look up the word in a dictionary	5.9	1.36	4.9	2.76
Go on reading and keep on trying to guess the word	3.3	1.51	4.4	3.21

Conclusions

Interpretation of these results must focus on several considerations. Subjects responded with their perception of their own reading behavior. Because textbook study strategies are employed frequently by university students, it was assumed that students could report on their own typical reading behavior. Second, this study dealt with difficult textbook material which is meant to be read and retained unlike more casual newspaper or magazine material. A sense of systematic seriousness as opposed to random browsing is appropriate in such textbook reading situations. Results, then, must be qualified by the fact that students reported their self-perceptions of how they read textbook material.

Several differences in study approaches appear to differentiate good and poor readers. Good readers' reported strategies reflected a sense of the serious, systematic approach to text reading. In addition, good readers as a group were more unified and clear cut in reporting their behavior. On a scale of 1 to 7, good readers' responses indicated they almost always perceived themselves as using text aids, reading to remember, and actually

using a dictionary for vocabulary difficulties in such textbook material. The good readers also saw themselves as rarely "skipping around to get an idea" or merely "trying to guess the word" in such technical textbook material. Poor readers, however, appeared to be less certain of their reading behavior as reflected by mean scores which are near the center of the seven point scale. The good readers' superior sense of clarity about their reading was further reflected in an examination of response variability (s^2). The responses of good readers, as a group, are quite close together, while poor readers' responses reflected a wider range of variability; a variance that was usually double that of the good readers. Though ceiling effects can in part explain the tighter variance, it is important to note that good readers more clearly share the same self-perceptions.

Although few significant differences in the good and poor readers' study strategies were identified, the differences suggest some clear superiorities in the strategies reported by good readers. Good readers see themselves as more often reading for an overview. This is similar to Bransford's (1979) finding about relating new information to previous information and to Golinkoff's (1975-1976) conclusion that good readers focus on larger units of print. In addition, good readers seem to have a more appropriate sense that textbook reading is to be done systematically, using text aids and dictionaries and trying to remember important information. Skipping around and guessing are eschewed. Poor readers, on the other hand, display no clear self perception on any of these points.

Implications

This study has implications for further research and for teaching. Further research should examine the study strategies employed by readers with text material. By varying the type of text and purpose for reading, the

relationship between study problems and readers' problem solving strategies could be identified. Discourse analysis of the text and analysis of reader protocols could be combined to study the ways in which readers apply background knowledge to their reading of text material.

Implications of this study for teaching revolve around the conclusion that good readers have a clear and appropriate sense of how textbook material ought to be read. This clear sense of strategy could be shared with less competent readers through the use of text discussion groups that focus not only upon what was read but also how it was read. Teachers could also encourage good readers to share their reading/thinking strategies by asking in class follow-up questions like, "How did you arrive at that answer?" The opportunity for poorer readers to observe good readers reading for an overview and then relating important new details to the general chapter framework or to previously learned information could benefit the poorer readers.

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Appendix A

Table A

Name _____

You have had a few minutes to examine the reading material in front of you. Assume that this material has been assigned to you as part of a class.

As accurately and as truthfully as you can, please indicate how frequently each of the following reading activities describes you. Select one number to answer each question. Your answers will not influence your grade in this course.

1. For an assignment like this, my real goal(s) would be:

	almost never			½ the time		almost always	
to understand each word	1	2	3	4	5	6	7
to remember almost every word in the chapter	1	2	3	4	5	6	7
to read carefully and understand every word	1	2	3	4	5	6	7
to remember the details of the chapter	1	2	3	4	5	6	7
to answer questions at the end of the chapter	1	2	3	4	5	6	7
to prepare for a test or quiz	1	2	3	4	5	6	7
to get main ideas from the chapter	1	2	3	4	5	6	7
to get a general idea of the chapter	1	2	3	4	5	6	7
to be able to put the author's words in my own	1	2	3	4	5	6	7

2. As you read, which of the activities below might you also do?

go over questions before reading	1	2	3	4	5	6	7
give special attention to graphs, italics, sub headings, etc.	1	2	3	4	5	6	7

	almost never			½ the time		almost always	
read topic sentences and skim paragraphs	1	2	3	4	5	6	7
skip around to get an idea of the topic	1	2	3	4	5	6	7
skim for main points and summary	1	2	3	4	5	6	7
carefully read the chapter from beginning to end	1	2	3	4	5	6	7
read the chapter to comprehend and remember the important information	1	2	3	4	5	6	7
concentrate as hard as you can on what is on the page	1	2	3	4	5	6	7
underline important parts	1	2	3	4	5	6	7
take notes on important parts	1	2	3	4	5	6	7
outline the chapter	1	2	3	4	5	6	7

3. What might you do if you come to a word/words you don't know?

ask a friend for help	1	2	3	4	5	6	7
ask your instructor for help	1	2	3	4	5	6	7
look up the word in a dictionary	1	2	3	4	5	6	7
copy down the word if it recurs	1	2	3	4	5	6	7
try to pronounce the word	1	2	3	4	5	6	7
examine the parts of the word to see if you can understand part of it	1	2	3	4	5	6	7
try to guess the word from the way it is used	1	2	3	4	5	6	7
read the sentence over several times	1	2	3	4	5	6	7
go on reading and keep trying to guess the word	1	2	3	4	5	6	7
ignore the word and skip it	1	2	3	4	5	6	7

4. If you wanted to remember the material in the chapter, which of these activities might you do?

	almost never			½ the time		almost always	
reread the chapter once	1	2	3	4	5	6	7
reread the chapter two or more times	1	2	3	4	5	6	7
skim and review, stopping to reread underlined parts	1	2	3	4	5	6	7
skim through looking at subheadings, italics, graphs, charts, etc.	1	2	3	4	5	6	7
reread topic sentences	1	2	3	4	5	6	7
look for the ideas with the most examples	1	2	3	4	5	6	7
underline the main ideas	1	2	3	4	5	6	7
take notes on the main points	1	2	3	4	5	6	7
outline the chapter	1	2	3	4	5	6	7
try to answer end-of-the chapter questions	1	2	3	4	5	6	7
study information from the chapter	1	2	3	4	5	6	7
discuss the reading with someone else	1	2	3	4	5	6	7

5. If I'm not interested in something it is difficult for me to read it.

1 2 3 4 5 6 7

6. Even when I'm not interested, I usually understand and remember what I read.

1 2 3 4 5 6 7